

**REMARKS**

Claim 47 is canceled. New claims 60-65 are added.

The drawings are objected to under 37 C.F.R. §1.83(a) for allegedly not showing the positively recited "intermediate structure" of claims 55, 56 and 59.

Moreover, claims 55-57 and 59 are rejected under 35 U.S.C. §112, first paragraph, for reciting "intermediate structure" wherein the Examiner alleges such structure is not originally disclosed by the originally-filed application.

Respectfully, the Examiner is mistaken. Fig. 9 of the originally-filed application illustrates exemplary embodiments of intermediate structures, as recited in claims 55-57 and 59, which are referenced as 66a and 66b. Additionally, Fig. 15 of the originally-filed application illustrates an exemplary embodiment of the intermediate structure and referenced as 66a.

Accordingly, the objection against the drawings is improper and must be withdrawn. Additionally, the §112, first paragraph rejection against claims 55-57 and 59 is improper and must be withdrawn. No other rejections are presented against claims 55-57 and 59, and therefore, such claims are allowable.

Claims 34-35, 40, 42-44 and 49 are objected to as being dependent from a rejected base claim, but would be allowable if rewritten in independent form. New claims 63-65 are such rewritten claims 34-35 and 40, and therefore, new claims 63-65 are allowable.

Claims 31-33, 36-39, 41, 45, 46, and 50-53 are rejected under 35 U.S.C. §102(e) as being anticipated by Leedy (U.S. Patent No. 5,323,035). Claims 47, 54 and 58 is rejected under 35 U.S.C. §103(a) as being unpatentable over Leedy as applied to claim 31 above, and further in view of Liu, et al. (U.S. Patent No. 5,177,439).

Regarding the rejection against independent claim 31, independent claim 31 is

amended to recite a substrate comprising bulk semiconductive material. The Examiner correctly states Leedy fails to teach bulk silicon and relies on Liu to provide teachings to a substrate that comprises silicon (pg. 11 of paper no. 0506). However, Liu also fails to teach a substrate comprising **bulk semiconductive material**. In fact, the Examiner points to teachings of Liu and correctly states Liu teaches a substrate comprising silicon without addressing bulk silicon except for summarily, which Applicant addresses below (pg. 11 of paper no. 0506). The Examiner is respectfully reminded that the MPEP states that to establish prima facie obviousness of a claimed invention, all of the claimed limitations must be taught or suggested by the prior art. MPEP §2143.03 (8<sup>th</sup> ed., rev. 3, vol. 2) *citing In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Since Leedy and Liu fail to teach the positively recited limitation of claim 31, it is inconceivable that any combination of the references teaches the recited limitation of claim 31. Having not demonstrated that all the positively recited limitations of claim 31 are taught or suggested by the combination of references, the obviousness rejection fails and must be withdrawn. Accordingly, claim 31 is allowable.

Moreover, The Examiner is reminded that a proper obviousness rejection requires a motivational rationale for combining and modifying a primary reference as stated by the Federal Circuit Court and MPEP. The Examiner must present a motivational rationale based on “objective evidence and [the] making [of] specific factual findings with respect to the motivation” to modify primary reference devices. *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ 2d 1430, 1433-34 (Fed. Cir. 2002); MPEP §2143.01 I. (8<sup>th</sup> ed., rev. 3, vol. 2). The Examiner relies on the teachings of Leedy to a dielectric portion 14 to teach the recited limitations of claim 31, particularly the positively recited substrate and projection of claim 31 (pg. 5 of paper no. 0506). Since the Examiner correctly states Leedy fails to teach the

positively recited bulk semiconductive material, the Examiner must rely on teaching of Liu to modify the Leedy device wherein the dielectric portion 14 of Leedy is replaced with bulk semiconductive material. However, the dielectric portion 14 of Leedy is taught to provide specific characteristics needed for the Leedy device and there is absolutely no teaching, no objective evidence, that bulk semiconductive material meets these specific characteristics.

That is, Leedy teaches that the dielectric material of substrate 14 is to “enhance durability of tip 18 and to achieve a desired electric signal impedance characteristics between adjacent insertion structures” (col. 4, Ins. 61-67) (emphasis added). The Examiner has failed to provide **objective evidence** or specific factual findings that bulk semiconductive material can achieve the desired electric signal impedance characteristics between adjacent insertion structures as required for the Leedy device. Accordingly, there is no teaching for a motivational rationale to modify the Leedy device to substitute the dielectric portion 14 with bulk semiconductive material. Since the Examiner has failed to provide an appropriate motivational rationale for modifying the Leedy device to substitute the dielectric portion 14 with bulk semiconductive material, the obviousness rejection against claim 31 must fail. Claim 31 is allowable for this additional reason.

Furthermore, the Examiner states it is old and well known to make substrates out of bulk silicon material. However, this is not the test for an appropriate motivational rationale for an obviousness rejection and is specifically contrary to Federal Circuit and MPEP authority above requiring a motivational rationale based on **objective evidence** or specific factual findings. Moreover, the Federal Circuit has specifically rejected the notion that “well known in the art” can support an obviousness rejection stating that “it is irrelevant in determining obviousness that all or all other aspects of the claim may have been well known in the art.” *Jones v Hardy*, 727, F2d 1524, 1527, 1528, 220 USPQ 1021, 1024

(Fed. Cir. 1984). Claim 31 is allowable.

Claims 32-41, 45-46, 55 and 60-62 depend from independent claim 31, and therefore, are allowable for the reasons discussed above with respect to the independent claim.

Dependent claim 46 recites wherein an **entirety** of the projection is **spaced** from the substrate. The Examiner relies on dielectric portion 14 of Leedy, shown in Fig. 2, to allegedly teach the projection **and** substrate positively recited in claim 46 (pg. 5 of paper no. 0506). However, the projection of Leedy extends directly from the substrate (dielectric portion 14 for both in Fig. 2). Accordingly, Leedy fails to teach or suggest an entirety of the projection is **spaced** from the substrate as positively recited by claim 46. Claim 46 is allowable.

Regarding the anticipation rejection against independent claim 50, claim 50 is amended to recite a projection supported over a side of the substrate and another projection extending directly from the side of the substrate. That is, the projection and another projection are over the same side of the substrate. However, the Examiner relies on teachings of Leedy to a projection of a dielectric portion 14 over one side of the alleged substrate wherein the substrate is also allegedly taught by dielectric portion 14. For teachings of the another projection, the Examiner relies on either structures 40 or 42 of Leedy (pg. 8 of paper no. 0506). However, the projection of Leedy is located over one side of the portion 14 and the another projection of Leedy is located over the opposite side of the portion 14. That is, the alleged teachings of Leedy to a projection and another projection, as shown in Fig. 2, are on opposites sides of dielectric portion 14 and not over the same first side as recited by claim 50. Accordingly, Leedy fails to teach or suggest the positively recited limitation of claim 50, and therefore, claim 50 is allowable. The

amendment language for claim 50 is supported by the originally-filed application at, for example, Fig. 9.

Regarding the anticipation rejection against independent claim 51, claim 51 is amended to recite a substrate comprising **monocrystalline silicon**. The amendment language is supported by the originally-filed application at, for example, page 7. Leedy fails to teach monocrystalline silicon. Accordingly, Leedy fails to teach a positively recited limitation of claim 51, and therefore, claim 51 is allowable.

Regarding the anticipation rejection against independent claim 52, claim 52 is amended to recite **a second projection** over the first projection and comprising material of the substrate. The amendment language is supported by the originally-filed application at, for example, Fig. 9. The Examiner relies on teachings of Leedy to a dielectric portion 14 to allegedly teach the positively recited projection **and** substrate (pg. 9 of paper no. 0506). The dielectric portion 14 of Leedy fails to teach or suggest **a second projection** over the first projection and comprising material of the substrate. Accordingly, claim 52 is allowable.

Regarding the anticipation rejection against independent claim 53 recites wherein an entirety of the projection is **spaced** from the substrate. The Examiner relies on teachings of Leedy to dielectric portion 14 to teach the recited substrate **and** the projection (page 10 of paper no. 0506). However, the projection of Leedy (dielectric layer 14) extends directly from the substrate (dielectric layer 14), and therefore, it is inconceivable that Leedy teaches or suggests the projection is **spaced** from the substrate as positively recited by claim 53. Accordingly, claim 53 is allowable.

Claims 56-58 depend from independent claim 53, and therefore, are allowable for the reasons discussed above with respect to the independent claim.

Regarding the anticipation rejection against independent claim 54, claim 54 recites

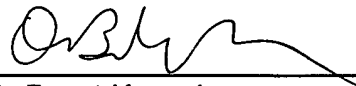
the substrate comprises bulk silicon. The cited art of record fails to teach or suggest bulk silicon. Accordingly, claim 54 is allowable.

Claim 59 depends from independent claim 54, and therefore, is allowable for the reasons discussed above with respect to the independent claim.

This application is now believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

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